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## PATENT ABSTRACTS OF JAPAN

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(71) Applicant: ROHM CO LTD

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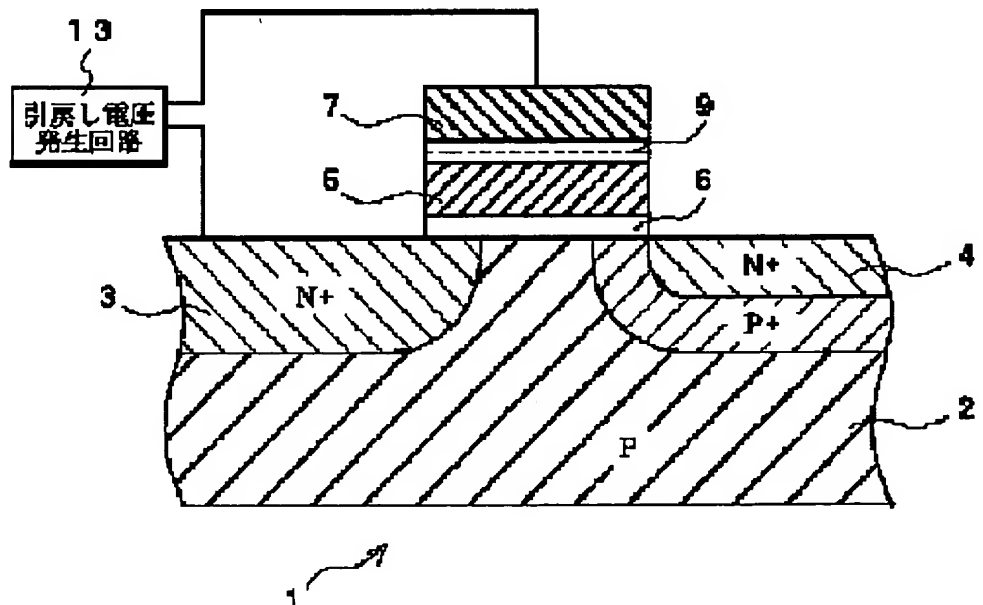
(74) Representative:

(54) NONVOLATILE  
SEMICONDUCTOR MEMORY  
DEVICE AND ITS USE

(57) Abstract:

PROBLEM TO BE SOLVED: To prevent characteristic deterioration of a gate oxide film due to hot holes produced at the time of erasing.

SOLUTION: In a restoring voltage generation circuit 13 connected to a source region 3, pulse voltage 5V is applied in an initial state of erasing and when erasing proceeds, stepwise higher voltages 10V, 12V of the pulse voltage are applied. In the initial state of erasing a difference in voltage between a floating gate electrode 5 and the source region 3 reduces, hot holes are hardly produced. And, when erasing proceeds and the difference in voltage between the floating gate electrode 5 and the source region 3 decreases, the pulse voltage to be applied is raised by that portion. Thereby, electrons can be drawn until a desired threshold voltage is reached.



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